

# SPECIAL AIRWORTHINESS INFORMATION BULLETIN

Aircraft Certification Service  
Washington, DC



U.S. Department  
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**Federal Aviation  
Administration**

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***This is information only. Recommendations aren't mandatory.***

## Introduction

This Special Airworthiness Information Bulletin alerts you, owners and operators of airplanes with passenger seats equipped with "D-ring" type seat belt attachment fittings (see figure 1), that **these fittings have the potential of inadvertently releasing the seat belts attached to them.** The "D-ring" type of seat belt attachment fitting is a type that has been commonly used by most seat manufacturers. These fittings may be installed on, but not limited to the following aircraft:

Aerospatiale (S.N.I.A.)	ATR42
	ATR72
	SN-601 "Corvette"
Airbus Industries	A300
	A310
	A318
	A319
	A320
	A321
	A330
BAE Systems Limited	A340
	ATP
	BAe 146
Boeing	Jetstream 4100 Series
	707
	717
	727
	737
	747
	757
	767
	777

Bombardier Aerospace Inc.	BD-100-1A10 (Challenger)
Bombardier Inc.	BD-700-1A10 (Global Express)
	CL-600-1A11 (CL-600 series)
	CL-600-2C10 (CRJ 700 series)
	CL-600-2D24 (CRJ 900 series)
	DHC-3
	DHC-4
	DHC-6
British Aerospace Airbus Limited	DHC-7
	BAC 1-11
Cessna Aircraft Company	500
	550
	S550
	560
	560XL
	750
Dassault-Aviation	Fan Jet Falcon
	Mystere-Falcon 20
	Mystere-Falcon 200
	Mystere-Falcon 50
	Mystere-Falcon 900
	Falcon 900EX
	Falcon 2000
	Falcon 2000EX
Embraer	EMB-120
	EMB-135
	EMB-145
Fairchild Dornier GmbH	328-100
	328-300
Fokker Services	F27
	F.28
Gulfstream Aerospace Corporation	G-IV
	GV
	GV-SP
Gulfstream Aerospace LP (Israel Aircraft Industries, Ltd.)	Astra
	Galaxy
Israel Aircraft Industries, Ltd.	1121
Learjet	24
	25
	31
	35
	45
	55
	60
Lockheed Martin Corporation	L-1011

McDonnell Douglas	DC-8
	DC-9
	DC-10
	MD-11
Raytheon	BAe.125
	BH.125
	DH.125
	HS.125
Saab Aircraft AB	SAAB 2000
	SAAB 340
Short Brothers PLC	SD3-30
	SD3-60

## Background

The FAA has received reports indicating that during two accidents involving transport category airplanes, several passengers' seat belts had released from the seat attachments (i.e., the seat belts remained buckled but had become unhooked at their attachment fittings to the seat). The absence of damage to the hook end of the seat belts and the "D-ring" type seat belt attachment fittings suggests that in each case, the fitting aligned with the opening in the hook end of the seat belt, and the seat belt became detached from the "D-ring" type seat belt attachment fittings. Detachment of a seat belt from the "D-ring" type seat belt attachment fittings could result in injury to the seat occupant during an accident, turbulence, or a hard landing.

During our investigation, we discovered one repeatable method of demonstrating the seat belt detachment. When the hook end of the seat belt is near the seat belt fastener that attaches the fitting to the seat, the seat belt hook end can become aligned such that the hook end is contacting two points on the "D-ring" fitting. In this configuration, the spring keeper on the hook end of the seat belt is in alignment with the upper portion of the "D-ring" type attachment fitting (figure 2). Detachment occurs when an out-of-plane load is applied to the hook end of the seat belt by the seat belt webbing. As the seat belt attempts to align the hook end of the seat belt with the load, the spring keeper is depressed and the seat belt becomes detached from the fitting.

Figure 1

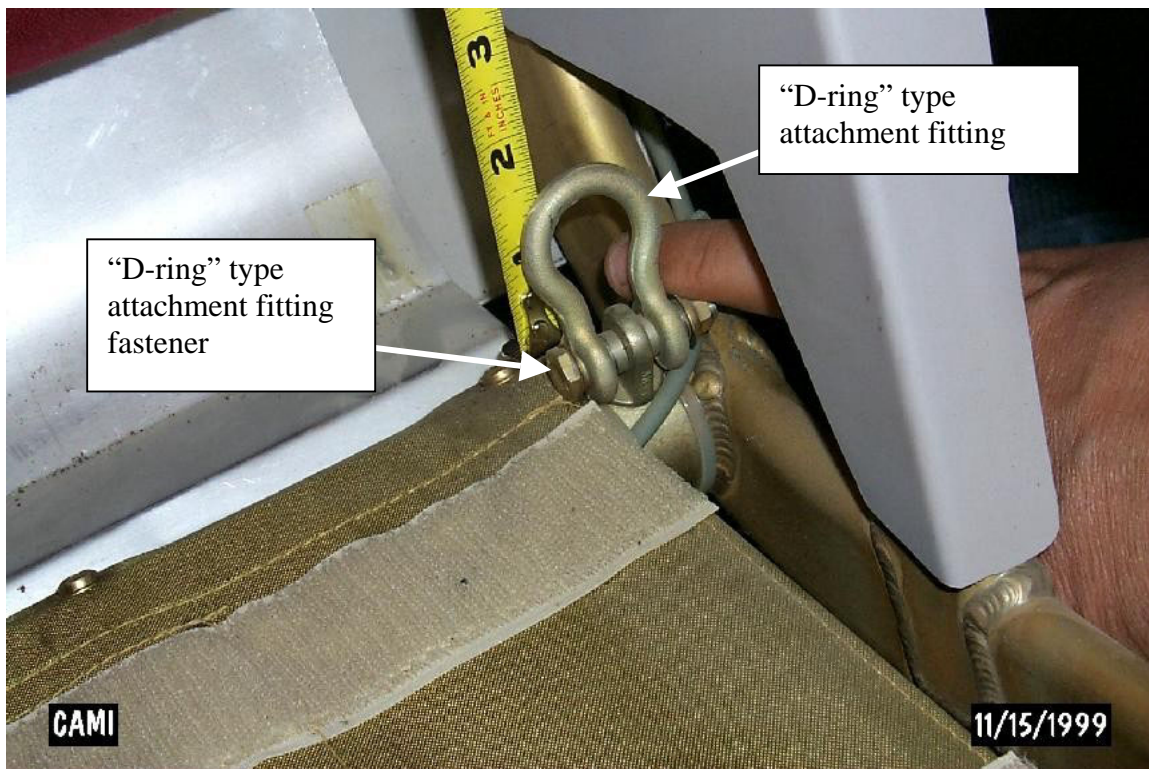
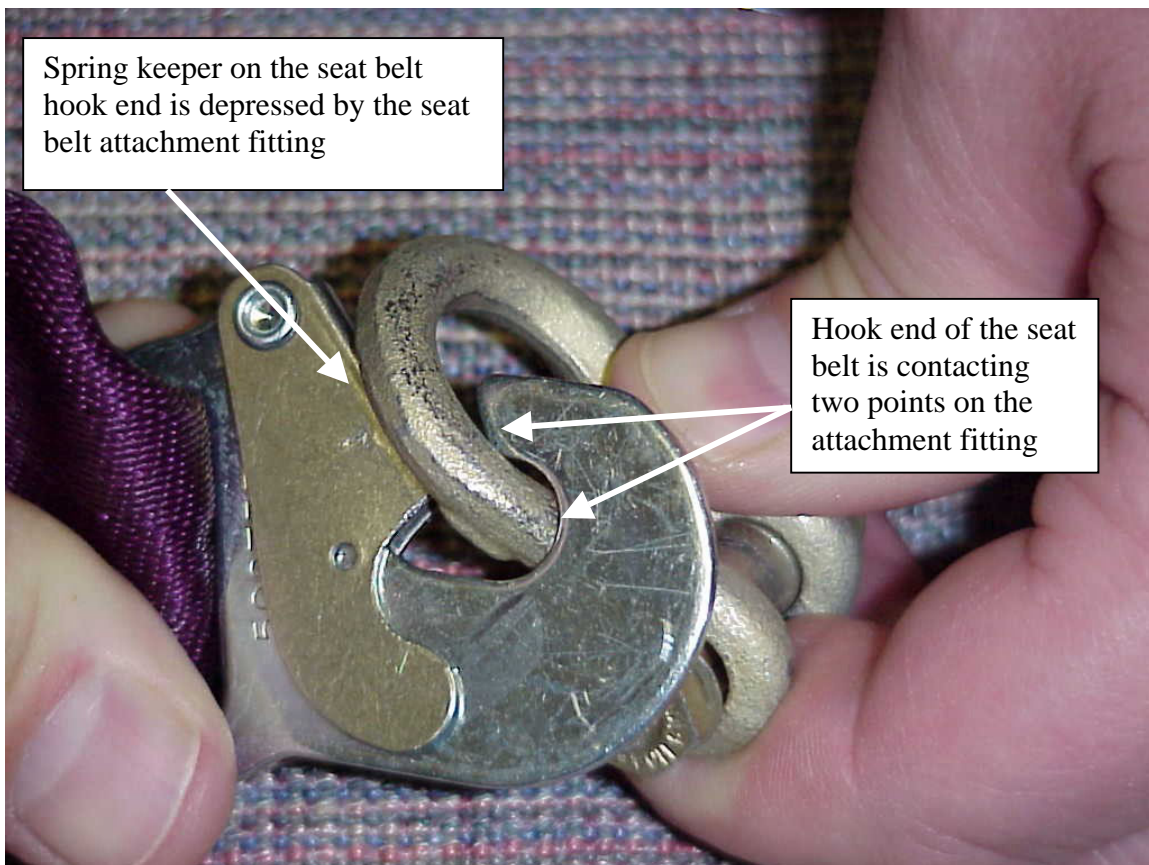


Figure 2



## **Recommendation**

The FAA recommends that you inspect your passenger seat (seat) belts. **If the seats have the “D-ring” type of seat belt attachment fitting, we highly recommend that you replace the fitting with an improved design fitting.** The seat belts on the passenger seats are replaced periodically because of wear in service. We recommend that you replace the “D-ring” type of seat belt attachment fittings as soon as possible but no later than when you replace the passenger seat belts.

For seats that have Technical Standard Order (TSO) approval, the operator should contact the seat manufacturer of the seats for service information. For seats that aren’t TSO approved, the operator should contact the airplane manufacturer for service information.

## **For Further Information Contact**

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